A NEW SPECIES AND SOME NEW RECORDS IN THE GENUS *CLOACINA* (NEMATODA : STRONGYLOIDEA) FROM WESTERN AUSTRALIA

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SUMMARY

Cloacina setonicis sp. nov. is described from *Setonix brachyurus* from Rottnest Island, Western Australia. It differs from *C. bancroftorum* and *C. thetidis* in the presence of teeth in the oesophagus. Four species are recorded from *Macropus robustus* from near Marble Bar, namely: *C. communis*, *C. parva*, *C. hydriformis*, and *C. magnipapillata*. *C. magna* is considered a synonym of *C. communis*.

INTRODUCTION AND ACKNOWLEDGMENTS

The nematodes recorded below were very kindly sent to the author by Dr. Shelley Barker of the Zoology Department of the University of Western Australia (from *Setonix brachyurus*) and Dr. F. H. M. Ealey then of the C.S.I.R.O. Wild Life Division (from *Macropus robustus*).

The four species of *Cloacina*, *C. communis*, *C. magnipapillata*, *C. hydriformis*, and *C. parva* which have been identified from *Macropus robustus*, have each been compared with para-type material in the Helminthological Collection of the Zoology Department of the University of Adelaide. They agree with the original descriptions, but in the first two listed, teeth have been observed in the oesophagus; in the other two these are absent. Discussion and description of these teeth is deferred to a separate study (Mawson, 1961, 84).

Cloacina setonicis, sp. nov.

(Figs. 1-5)

Host and Locality: *Setonix brachyurus*, Rottnest Island, Western Australia.

Short stout worms, tapering in oesophageal and tail regions. Males 3·5-4·2 mm. long, 350-400μ wide, females up to 7·7 mm. long, and to 600μ maximum breadth. Six lips and six elements of leaf crown distinct. Four submedian papillae small, each of two segments; lateral papillae very small. Buccal ring about 20μ long, 100μ diameter in male, 130μ in female, with symmetrically undulating anterior and posterior borders. Lumen of anterior end of oesophagus very wide in all specimens, with two circles each of three backwardly directed teeth, projecting from the wall of oesophagus into lumen. Nerve ring lies just anterior to mid-length of oesophagus, at same level as long thread-like cervical papillae; excretory pore just behind this.

Tail of female conical and sharply pointed, about 35μ long. Vulva 100μ in front of anus, and vagina about twice as long as tail. Eggs about 120μ by 80μ.

Spicules unusually long, 1/1·4-1/1·7 of body length, except in one specimen in which this proportion is 1/3. Gubernaculum heart-shaped, weakly developed. Bursa large, ventral lobes joined ventrally, dorsal lobe only slightly

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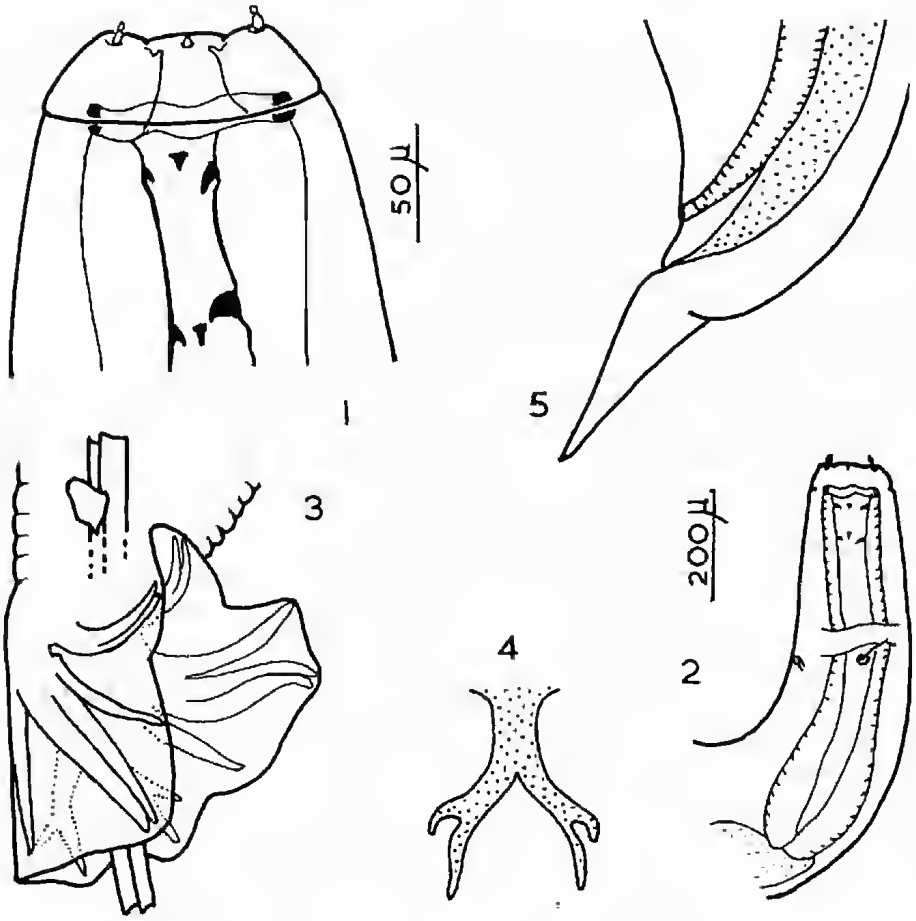
separated from laterals, and with only slight median indentation. Arrangement of rays shown in Figs. 3 and 4. Preburs al papillae present.

The new species closely resembles *C. bancroftorum* Johnston and Mawson (1939, 133) and *C. thetidis* Johnston and Mawson (1939, 532) in the shape of the oesophagus and the character of the head, but differs from them in spicule length and in the presence of teeth. The type specimens of these two species have been examined, and teeth do not appear to be present.



Cloacina parva Johnston and Mawson

Johnston and Mawson, 1938, 282. *Macropus robustus, Petrogale penicillata lateralis,* Central Australia.

Host and Locality: *Macropus robustus,* near Marble Bar, Western Australia.

The single male is 8·5 mm. long with oesophagus 1/13 and spicule 1/2·3 of body length; the six females are 6·8-11·8 mm. long, with oesophagus 1/13-1/16 of body length. No teeth were observed in the oesophagus.

Cloacina magnipapillata Johnston and Mawson

Johnston and Mawson, 1939, 540. *Macropus major, M. rufus,* New South Wales.
Johnston and Mawson, 1939, 307. *M. major,* Victoria.

Host and Locality: *Macropus robustus,* near Marble Bar, Western Australia.

About thirty worms are present. Males measure 5·9-8·3 mm. in length; oesophagus 1/7·5-1/13, and spicules 1/2-1/2·6 of body length. Females are

6·0-12·8 mm. long, with oesophagus 1/10-1/16 of body length. There is a slight enlargement of the oesophagus just in front of the nerve ring, and three teeth project into the lumen in this region. These structures will be described later (Mawson, 1961, 88).

Cloacina communis Johnston and Mawson

Syn. *Cloacina magna* Johnston and Mawson.
Johnston and Mawson, 1938, 275, 277. *Macropus robustus*, Central Australia.
Johnston and Mawson, 1939, 133. *Protemnodon parryi* (*s. Macropus parryi*), Queensland.
Johnston and Mawson, 1940, 97. *M. major melanops*, *Petrogale xanthopus*, South Australia.
Johnston and Mawson, 1940, 468. *M. major*, New South Wales.

Host and Locality: *Macropus robustus*, near Marble Bar, Western Australia.

This species is easily recognised because of the large size and distinctive shape, both of the whole body, especially the female, and of the oesophagus. *C. magna* Johnston and Mawson was described from the same host and from the same locality as the type of *C. communis*. It is now thought after comparison of the original material, that the very slight differences observed between the species are insignificant, and only one species is concerned. *C. communis* has page priority. Three females are present in the new material. They are 38-40 mm. long, the oesophagus 1/14·0-1/14·3 of the body length. Teeth are present in both paratype and fresh material, lying in three groups one behind the other where the oesophagus widens towards the basal bulb. These will be more fully described later.

Cloacina hydriformis Johnston and Mawson

Johnston and Mawson, 1938, 273. *Petrogale penicillata lateralis*, Central Australia.
Johnston and Mawson, 1940, 97. *Macropus major melanops*, South Australia.

Host and Locality: *Macropus robustus*, near Marble Bar, Western Australia.

Cloacina hydriformis may be recognised by the large outstanding submedian cephalic papillae, and by the shape of the buccal ring, which is thin-walled with out-turned anterior margin. Only females are present in this collection. They agree with the original description, and no teeth have been observed in the fresh material. They are rather longer than the type specimens, 7·0-7·5 mm., with oesophagus 1/16·2-1/18·7 of the body length.

REFERENCES

JOHNSTON, T. H., and MAWSON, P. M., 1938. Strongyle Nematodes from Central Australian Kangaroos and Wallabies. Trans. Roy. Soc. S. Aust., **62** (2), pp. 263-286.

JOHNSTON, T. H., and MAWSON, P. M., 1938. Strongyle Nematodes from Queensland Marsupials. Trans. Roy. Soc. S. Aust., **63** (1), pp. 121-148.

JOHNSTON, T. H., and MAWSON, P. M., 1938. Strongyle Nematodes from Marsupials in New South Wales. Proc. Linn. Soc. N.S.W., **64**, pp. 513-536.

JOHNSTON, T. H., and MAWSON, P. M., 1939. Some Nematodes from Victorian and Western Australian Marsupials. Trans. Roy. Soc. S. Aust., **63** (2), pp. 307-310.

JOHNSTON, T. H., and MAWSON, P. M., 1940. Nematodes from South Australian Marsupials. Trans. Roy. Soc. S. Aust., **64** (1), pp. 95-100.

JOHNSTON, T. H., and MAWSON, P. M., 1940. New and Known Nematodes from Australian Marsupials. Proc. Linn. Soc. N.S.W., **65**, pp. 468-476.

MAWSON, P. M., 1961. A Note on the Occurrence of Oesophageal Teeth in Species of the Genus *Cloacina* (Nematoda: Strongyloidea). Trans. Roy. Soc. S. Aust., **85**, pp. 84-89.